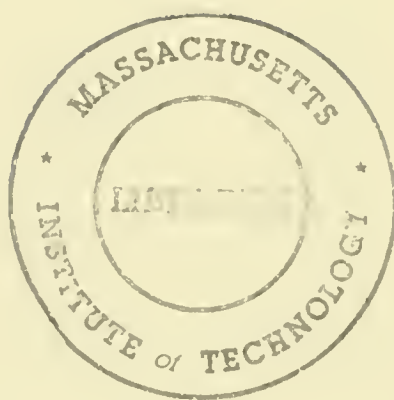


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ALFRED P. SLOAN SCHOOL OF MANAGEMENT

INTERPRETING INFLATION REPORTS

by

Michael F. van Breda

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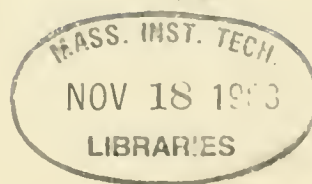
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Annual reports of most large companies today contain fairly extensive analyses of the impact of inflation on the affairs of the company. These analyses were called for by the accounting profession's major rule-making body, the Financial Accounting Standards Board, in response to growing dissatisfaction by the investment community with historical-cost accounting.

But what can be gleaned from these analyses? How might one begin to interpret these new numbers? Debates have raged for the last forty years over the meaning of inflation accounting in accounting journals. Unfortunately, much of this literature is arcane and relatively inaccessible to the average reader of financial reports, including non-financial management.

This article attempts to remedy this gap by exploring the impact of price changes in a numerically very simple example. The illustration is deliberately simple to avoid obscuring the essential and important conceptual issues. Each conceptual step developed by this presentation is then further illustrated by reference to the published reports of several major US corporations.

LIFO vs. FIFO

The example we begin with is an old one culled from the accounting literature. It concerns a wagon-dealer who purchases two identical wagons. In the first case, we assume one was bought January 1 for \$50, while the second was bought at the new price of \$60 on July 1. On December 31, the dealer sold one for \$75. What is her profit?

Common parlance defines profit as the difference between one's revenues and one's expenses. Revenue here and elsewhere in this article is \$75. The question we must address is what is the expense. Common-sense says that if we sold the \$60 wagon the profit is \$15, whereas if we



sold the \$50 wagon, the profit is \$25. This approach is termed specific identification of expenses for obvious reasons.

Assume, though, that for one reason or another the wagon-dealer does not know which one was actually sold. This is typically the case where purchases are heaped together. Think, for an obvious instance, of a hardware store dealing in loose nails. In these instances where specific identification is infeasible what is the profit?

Various assumptions can and have been made. One argument is that when in doubt take the average which is \$55 yielding a profit of \$20. Another is to assume that the first one purchased is the first one sold. Known as FIFO for short, this suggests the profit was \$25. A third assumption is that the last one purchased is the first one sold. Under this method, known as LIFO, the profit would be \$15.

Accountants are allowed to and do use all these various methods. The choice between them is often described as arbitrary. Can we, though, argue our way conceptually to one of them as being conceptually superior to the others? Many have answered in the affirmative. The argument runs as follows.

Assume that the dealer intends to remain in business. After the sale of either wagon, she will have to restock her inventory. If the price for new wagons remains at \$60, this implies that \$15 of the \$75 revenue can be paid out in dividends after restocking the inventory. If we choose then to define income as the monies that are free after inventory has been replaced, \$15 is the appropriate amount.

The argument suggests, in other words, that of all the various options open to accountants, LIFO is preferable, not because it reduces taxes, but because it is a better measure of what we mean by income. It does raise some ticklish questions, though, about what is meant by the term income or profit. These are addressed in more depth further in this

article under the heading of capital maintenance.

For the moment it is sufficient to note that currently accountants are allowed to claim any of \$15, \$20, or \$25 as income for the period. The justification for this is that income is the result of a matching of revenues and expenses. One's assumptions about the flow of expenses, in other words, whether it was the first or the last wagon that was sold, determine which profit will be reported. The flow assumption is essentially arbitrary.

The opposing argument is that flow is irrelevant. What matters is the current cost of replacement. In this case, that is \$60. The \$15 that is reported might be termed income available for distribution after replacement of inventory. We shall denote it sustainable income because it is the profit that could be sustained at the higher cost of \$60. It is not the income number of course: merely an income number based on one set of assumptions as to how one might define income.

SUSTAINABLE INCOME

Nobody has great difficulty in accepting this \$15 figure in part because it is based upon a known transaction. Our dealer did buy a wagon at the new price of \$60. There was a verifiable transaction that took place. Many firms use LIFO because of the conceptual argument and because of the existence of a transaction.

Consider, however, a second situation where our dealer buys both wagons at the start of the year for \$50. As before, prices rise to \$60 during the year, while one sale occurred at \$75. Now no transaction exists to justify the use of \$60 in the calculation of income. Specific identification, average cost, FIFO, and LIFO, all yield a cost of \$50. Under historical-cost accounting, the dealer is obliged to report a profit of \$25.

But has the situation changed substantively? Clearly, we no longer have a transaction. Is this a substantive change? Other wagon-dealers have presumably traded at \$60. The price exists, therefore, in the market-place. When inventory is replaced, as indeed it will be if the dealer's business is to continue unchanged, the disposable surplus will be \$15 and not the \$25. This is true regardless of the original costs.

To sharpen the argument, assume that the wagons cost \$80 initially. Many would argue that to sell these at \$75 would entail a loss of \$5. Those who favor price-adjusted accounting would say no. If the current cost is \$60, the profit is still \$15. The initial cost is irrelevant regardless of whether it is higher or lower than the current cost. All that matters is the latter figure--in our case \$60. The fact that no transaction at \$60 exists for this firm makes verification a little more complex but is otherwise besides the point.

Many are uncomfortable with this argument when costs are falling because the loss which they feel has occurred, is obscured. One should not feel this way, though, because it is really a matter of definition. What is being proposed is not a calculation of true net income but a measure of sustainable income. If the current cost is \$60 and the current selling price is \$75, by definition, \$15 is the income that can be sustained. A profit of \$25 or a loss of \$5 are equally valid measures, given a definition of income other than that income which can be sustained.

The conclusion that emerges from this is that we can get some idea of the impact of inflation on a company's business by calculating sustainable income. We can calculate this number whether we have transactions data showing purchases at current cost or not. Current generally accepted accounting practice requires companies to disclose this figure in the annual report.

Those companies who make purchases throughout the year, and turn their

inventory over fairly rapidly, and who assume a LIFO flow of goods will find that the cost of goods sold reported in their income statements will approximate the current costs needed to calculate sustainable income.

Consider General Motors, for instance. They reported cost of goods sold in 1979 of \$55.8 billion. This was on a LIFO basis for the most part, the only exception being some foreign inventory. To calculate sustainable income, they showed current cost of goods sold at \$56.1 billion: a relatively small change of \$300 million.

Contrast this with Chrysler which is on a FIFO basis. They reported cost of goods sold in their income statement at \$11.6 billion. This shifted upwards to \$11.9 billion in their calculation of sustainable income. Chrysler, therefore, reduced their income by \$239 million, a relatively much greater amount, in calculating what they could afford to pay out in dividends and yet sustain their present position.

COST SAVINGS

Thus far, we have ignored the balance sheet. Table 1 shows three balance sheets for the wagon dealer. The first shows the position at the start where she has two wagons on hand both at \$50 and cash of \$105. Her net worth is clearly \$205.

One year later, one wagon has been sold for \$75 cash. The inventory account drops to \$50 and the cash account rises to \$180. The net worth is, therefore, \$230. The change in net worth is \$25. This is also the net income of the dealer under ordinary generally accepted accounting principles where sales are \$75 and costs of sale are \$50.

In general, this relationship between income and the change in net worth must hold. Income has been defined as the amount one can distribute and yet retain one's capital. By definition then, income must be \$25 in this case. We began with a net worth of \$205 and ended with a net

worth of \$230 so that \$25 could be distributed.

But this is not sustainable income. That we have already seen is \$15. The difference between the two income numbers is clearly equal to the difference between the current cost of replacing inventory and the reported cost at which it was sold. It is often referred to as an inventory profit.

Looking at it from another angle, one might say that because she had great business acumen she purchased the wagons in advance of inflation. She thus saved \$10. This \$10 in cost savings, together with the \$15 sustainable income, makes up the \$25 in realized net income. As a result, these cost savings are termed realized cost savings.

The argument is incomplete, though, since the balance sheet shows the remaining wagon at \$50 when its current cost is \$60. Making this change as we do in column (3) raises net worth to \$240 and suggests that income is really \$35, that is \$240 less the opening net worth of \$205.

It is difficult to resist the attraction of the argument in the last paragraph. The dealer's wealth at the start is unarguably \$205. By the same token, her wealth is \$240 at the end of the period. This last is made up of \$180 cash and a wagon whose current cost is \$60. It would still be \$240 if a new wagon were purchased at \$60 - or any other cost for that matter. In other words, the sustainable income notion does not affect our conclusion that the increase in her wealth is \$35.

In brief, we now have three income numbers to contend with. The lowest is sustainable income based on what remains of incoming funds after setting aside sufficient to replace the one wagon sold. The second is historical net income, sometimes referred to as realized income, which is revenue less historical cost. The highest is the increase in wealth often denoted realizable income.

Each income number has its own interpretation. Sustainable income

has been treated at length. Net income or realized income differs from sustainable income by the amount of the realized cost saving. The wagon was purchased for \$10 below its current cost. The dealer realized a cost savings of \$10 which added to the sustainable income of \$15 yields the realized income of \$25. This is what she realized this year. Next year, though, all other things being equal, she will only realize the sustainable income of \$15. Sustainable income attempts, therefore, to predict future realized income. Realized income, on the other hand, simply reflects the past, what has happened.

Realizable income takes us one further step into the future. It differs from realized income by the increased cost of the unsold wagon. This cost saving, which actually occurred this period, will not be realized until next period. It is an unrealized cost saving this period.

Restated, sustainable income is the income that will obtain for the foreseeable future if there is no further inflation. Realized income is this period's sustainable income plus the realized cost savings. Realizable income is realized income plus a measure of future, as yet unrealized cost savings. Equivalently, this last is an indicator of the increase in wealth in this period.

It is instructive to note that accounting in this manner does not change total net income. All it does is to reallocate it between periods. In our example, the total profit from the sale of two wagons is \$50. Historical cost accounting would split this evenly at \$25 per period as Table 2 reveals. The current cost accounting that we have been treating would claim a total of \$35 this period and \$15 the next. (There is no inflation in period 2 and hence there can be no further cost savings.)

It is a worthless exercise to attempt to prove that one of the three income numbers is the true one. By the same token, though, it is highly misleading to claim, as many firms do, that the sustainable income number

is the real income of the firm. It may well be the lowest and, therefore, a useful political tool in bargaining for a better deal for business. On the other hand, the dealer who bemoans a profit of \$15 actually made \$25 and had an increase in wealth of \$35 - not nearly so bad.

To drive the point home, consider General Motors again. They reported sustainable income of \$4.0 billion before tax. They paid taxes on their net income of \$2.2 billion which gave them an effective tax rate of 58% on their sustainable income. In 1979, though, General Motors had total cost savings of \$2.9 billion, making its pretax realizable income or its increase in wealth a considerably larger \$6.9 billion. The effective tax rate on this is only 32%.

There are thus several stories to be gleaned from current cost accounting. To lay inordinate stress on any one of the three income numbers can only mislead. Demand for current cost accounting arose because of the sole emphasis on net income. We will create as many complaints in the future if all our emphasis falls on sustainable income say. To understand the dealer's business, we need to know the realized and unrealized cost savings as well as the sustainable income - in other words, all three income numbers.

CONSTANT DOLLARS

All our analysis thus far has been in terms of dollars. Realizable income was 35 dollars. Inventory costs rose from 50 to 60 dollars, and so on. An immediate and obvious question to ask is what profit did she "really" make. The follow-on question is what one means by "really."

One answer is to measure wealth in terms of a basket of goods. The increase in monetary wealth that we used as an index of income could be translated into an increase in purchasing power. This would tell us what profit she really made.

To illustrate this process assume that at the beginning of the period being examined, a loaf of bread cost \$1.00. At the end of that same period, bread is assumed to cost \$1.20. We have chosen a basket consisting of one item only in other words. This is done to simplify arithmetic, but it also serves to sharpen the conceptual issues.

Consider first the dealer's initial purchasing power over bread, though. She has \$105 cash which will purchase 105 loaves. She also has two wagons costing \$50 a piece and convertible into 100 loaves. Her initial real wealth, therefore, is 205 loaves.

By the end of the period, bread has risen to \$1.20. The \$180 cash that she has in hand will now purchase only 150 loaves. What of the \$50 wagon? A moment's thought reveals that though its monetary value is now \$60, its real value is still 50 loaves. This is a vitally important point that bears restatement.

In terms of inflation, monetary items such as cash steadily decline in real value. The cash will purchase progressively less. On the other hand, real assets like wagons tend to retain their value. They do this by rising in dollar terms - in our case from \$50 to \$60. This higher monetary value offsets in part or in whole the rise in the monetary cost of the basket of goods that forms our measure of purchasing power.

The result is that the real wealth of the wagon-dealer measured in terms of loaves of bread drops to 200. Instead of income of \$35, or \$25, or even of \$15, she faces a loss of five loaves. The profit has shrunk and indeed reversed itself. The answer to what did she "really" make is minus five loaves.

To see why and how we need to turn to the income statements in Table 4. Revenue of \$75 will purchase 62 1/2 loaves. The wagon sold currently costs \$60 which would purchase 50 loaves. The sustainable income of \$15 translates into a real sustainable profit of 12 1/2 loaves. In other words,

if no further inflation is experienced, the dealer will be able to consume 12 1/2 loaves of bread after replacing the wagon. This consumption can be maintained year after year without affecting the physical make-up of the firm.

In that year, a cost saving of \$10 was realized. The cost of the wagon rose from \$50 to \$60. In real terms, though, there was no cost saving at all. Each wagon equated to 50 loaves of bread at the start of the year and at the end of the year. The cost saving is a monetary phenomenon only, therefore. It vanishes as soon as one enters the real world. This is equally true for unrealized cost savings.

Here lies the explanation for why many feel uncomfortable with realizable income numbers. They feel, correctly, that cost savings, whether realized or unrealized, are merely paper gains. This is absolutely true. In general, real cost savings tend to zero. And in that sense, sustainable income is a better measure of what one "really" made than realized or realizable income.

But that is only half the story. As a result, it is very misleading to leave it there. One has still to include the effect of inflation on monetary items such as cash. The dealer started with \$105 worth 105 loaves. She still has \$105 at the period's end when they would purchase 87 1/2 loaves only. During the period, therefore, her monetary asset lost purchasing power to the extent of 17 1/2 loaves. The net result was to reduce her real wealth by 5 loaves.

This decrease of wealth of 5 loaves can easily be translated into the dollar-equivalents of \$6, since each loaf equates to \$1.20 in 19X1. Equally, the purchasing power loss of 17 1/2 loaves translates to \$21.00. In other words, the real change in wealth measured in current dollars is sustainable income of \$15 less the purchasing power loss of \$21.

Most firms owe monies rather than own monies. They are net debtors

on balance. In times of inflation, those who own cash lose purchasing power. Those who owe cash, on the other hand, gain purchasing power. These are merely opposite sides of the same coin. The result for most firms is that they show not purchasing power losses but purchasing power gains.

Take General Motors again. They had monetary assets of \$8.5 billion in 1979 and monetary liabilities of \$12.3 billion. They were net monetary debtors, therefore, in the amount of \$3.8 billion. In 1979, they reported a purchasing power gain as a result of \$182.2 million. Adding this to their constant dollar sustainable income of \$1,776.1 million gave them a real increase in wealth of \$2.0 billion - considerably less than the \$4.7 billion increase in their nominal wealth.

CAPITAL MAINTENANCE

All definitions of income go back to that of an English economist, Sir John Hicks (1946), who offered the following essentially: income is what one can spend and still remain as well off. Stated alternatively, income is what remains after one's capital is maintained.

The critical phrase here is capital maintenance. One can define this in numerous ways and measure it in equally many. Each leads us to a different definition of income that parallels the discussion to this point. We begin by measuring capital in terms of dollars.

One may speak then of financial capital. Our wagon dealer began with financial capital of \$205 cash, presumably, of which \$100 was spent on wagons. At the end of two years with both wagons sold and no new wagons purchased she would have financial capital of \$255 in cash. One can say that her income based on maintaining her financial capital was \$50. This is the approach of generally accepted accounting.

Alternatively, one may speak of physical capital maintenance. She

began trading with two wagons on hand under this view and may only count her income after replacing these two wagons. Since new wagons cost \$60 each this would leave her with \$135 cash, plus two wagons at the end. Her income based on physical capital maintenance is \$30, therefore. This should be recognizable as the sustainable income approach.

Each of these definitions may be measured in real terms as an alternative to the dollar amounts above. Her initial financial capital in real terms was worth 205 loaves of bread. At the end of the two years, her financial capital of \$255 was worth only 212.5 loaves. After maintaining real capital, her income was merely 7.5 loaves.

Unfortunately, the definitions do not end there. Consider what one does if wagons suddenly become technologically obsolete. Say that a new wagon costs \$60 but that a new-fangled automobile is available for \$55. Such a situation does not affect income based on financial capital, but it raises ticklish problems for the proponents of a physical capital definition.

The Securities and Exchange Commission ruled in 1976 that large public corporations should disclose the replacement cost of their assets. The SEC defined replacement in terms of the latest technology. Income, according to the SEC, based on replacement of physical assets, would have been \$150 revenue less \$110 to replace the two wagons by two automobiles. Sustainable income per sale on this basis would be \$20, not \$15.

The Financial Accounting Standards Board by contrast decided to base its definition of physical capital maintenance on replacement of like asset by like asset. In short, they want income after replacing two wagons by two identical wagons. In theory, this is appealing. It is difficult to apply, though, because replaced assets are rarely identical: 1980 automobiles differ substantially from 1979 automobiles. In practice, approximations have to be made to satisfy this definition.

The examples quoted by no means exhaust the various definitions of income that have been suggested in the literature. Each definition, though, owes its parentage to Hicks's basic concept of capital maintenance. Confronted by any particular measure of income, therefore, the reader is advised to analyse what assumptions about capital and capital maintenance are being made.

DEPRECIATION AND AMORTIZATION

Our sole concern so far has been with assets that are turned over within a single accounting period. What of long-lived assets? Consider, by way of example, the purchase of office furniture for \$20 initially. Assume further that this has a life of two years and that at the end of that time it will cost \$30 to replace.

If we begin by taking the life of the asset as our unit of analysis, then it should be easy to see that all our previous discussion applies unchanged. Historical cost accounting says that the original cost of \$20 must be charged to income as an expense. Sustainable income proponents argue that the replacement cost of \$30 should be charged to income. The first argument leads to realized net income. The second leads to sustainable income. The first is based on the maintenance of financial capital. The second argument assumes physical capital maintenance.

The problem becomes more complex when a single year is taken as the unit of analysis. How much of the \$20 or the \$30 should be charged off each year is essentially the question we must face. To clarify our thoughts in pursuit of an answer, we first must distinguish between amortization and depreciation.

Depreciation, strictly speaking, is a decline in value. If one purchases an automobile for \$8,000 and six months later finds it is worth only \$6,000, then \$2,000 of depreciation has occurred. If the automobile

in question was highly sought after, it might well have appreciated which is simply the reverse of depreciation.

The accountant, correctly speaking, is engaged in a process of amortization, that is spreading the original cost of the asset over the life of the asset. This has nothing to do with depreciation at all. Unfortunately, the misnomer depreciation has become imbedded in our language.

Price-adjusted accounting, by its very nature, is concerned with changes in value, that is with depreciation and appreciation. One needs to be aware, therefore, that as one shifts from historical-cost to current-cost statements a change in concept as well as of measurement may be occurring.

Assume first, however, that we do not shift concepts but attempt solely to adjust historical-cost amortization for inflation. Assume further that the dealer was amortizing the furniture on a straight-line basis of \$10 per year. Finally, assume that the cost of new furniture rose 20% in the first year to \$24 and a further 25% in the second. All this is set out in Table 5.

Adjusting amortization to reflect the realities of the new prices, we have an expense of \$12 in the first year and of \$15 in the second. This yields a total amortization of \$27 which is neither the original cost of \$20, nor the current cost of \$30. The problem is apparent. In retrospect, too little amortization was charged off in the first year. What to do with the so-called backlog of \$3 is still unresolved. The balance of opinion, at present, is to ignore it.

The Financial Accounting Standards Board fails to circumvent this problem, even though they recognize the need to shift concepts as well as measures. Instead of remeasuring amortization, they have elected to attempt to measure depreciation. They do this by seeking the current cost, not of a new asset, but of a used asset. Table 5 provides the

numerical details for our example.

At the end of the first year, her furniture was estimated to be worth, at cost, \$15. The net depreciation for the year was \$5, therefore, but this can be split into two parts. The first is the price rise in the new asset from \$20 to \$24. This is a cost saving identical to that recorded on the inventory.

The second part is the decline in value, at current costs, of a new to a one-year old asset. This amount of \$9 is genuine depreciation. As such, it can be interpreted meaningfully. It is the amount that must be set aside to maintain one's physical capital. Arithmetically, a second-hand asset valued at \$15, plus accumulated depreciation of \$9, is equivalent to a new asset valued at \$24.

In the second year, prices of one-year old furniture rose from \$15 to \$20, yielding a further cost saving of \$5. Depreciation in current cost terms for the year is \$20, since two-year old furniture is worthless. The amount so set aside is sufficient to replace the one-year old asset.

Accumulated depreciation for the two-year period, though, is \$29 which is not sufficient to fund a new asset. The backlog problem reappears, in other words. There is nothing one can, or necessarily should, do about this except perhaps acknowledge that accounting is based on estimates that only rarely are exactly fulfilled.

Note that the sum of the accumulated depreciation and the cost savings equals the original cost of the asset. This is an arithmetical necessity. One always begins with the original cost of the asset and ends with zero effectively. Under the FASB's requirements, one may increase the gross depreciation expense, but one has to then have an equal and offsetting cost saving. Depreciation, in our example, increased from \$20 to \$29. Against that, there were cost savings of \$9, leaving net depreciation of \$20.

This brings us back to the point raised earlier. Inflation-adjusted accounting does not change the totals. All it does is to reallocate it between periods. Under historical-cost accounting, cost savings are realized in profits when an asset is disposed of. Under inflation-adjusted accounting, those same cost savings are realized at the time of inflation. The point of recognition changes, but not the amount.

Finally, we need to distinguish realized from unrealized cost savings in this context. We may do this directly based on the FASB's approach. The \$4 cost saving in the first year applies to new furniture and should reasonably be amortized over the life of the asset. In other words, one might claim that \$2 had been realized and that \$2 was left to be realized in the second year. Of course, the full cost savings of the second year, plus the \$2 unrealized in the first year, are all realized in the second year.

Stated otherwise, to calculate sustainable income one charges revenues with current-cost depreciation. To the sustainable income, one adds the realized cost savings to yield realized income which is identical to historical net income. To realized income in turn, one adds the unrealized cost savings to obtain the realizable income of the firm.

Table 6 sets out the complete accounts for the two years of the dealer's business. Sustainable income, in the first year, based on current-cost depreciation and inventory, is \$6. This is the profit that might be maintained in the long run, if inflation were to cease. She purchased her assets in advance of the rise in prices so that in the short run she has realized cost savings of \$10 on inventory and \$2 on furnishings, making for realized income of \$18. She still has unrealized cost savings of \$12 in total that will lift her realized income in the second year.

All this can be restated in real terms when the cost savings will vanish to a greater or lesser extent, depending on how a rise in a specific

price reflects the rise in price of the basket of goods used to measure real changes, or, in our case, the price of bread. Furniture may have risen \$4 in price, but if bread rose by 20% in the same period, the real cost saving was precisely zero. Rather than do the numerics of this, we turn in our final paragraph to the inflation reports of Goodyear Tire and Rubber Company.

Goodyear Tire and Rubber Company

The Goodyear Tire and Rubber Company reported net income of \$146.2 million for the 1979 calendar year. Profit-wise, it was a bad year for the company following as it did record profits in 1978 of \$226.1 million dollars. The Chairman's report glossed over this fall in profits by focusing shareholder attention on the record sales of \$8,238,676,000 (sic), "representing a 10 percent increase over 1978." Nothing appears to have been said about the dividend which at 93.1 million was 64 percent of net income. The Chairman of the Executive and Finance Committee did claim, however, that the company intended to reduce its debt in line with its "clearly defined goals and objectives."

Such were the facts that Goodyear presented to its shareholders in early 1980. But were they indeed facts? Given what we now know about inflation, how do the claims of the company's directors compare with the real underlying situation? What story might they have told their shareholders? How might they have interpreted the effects of inflation? Table 7 has their inflation reports.

A first and obvious question is the real growth in sales. It turns out that inflation in 1979 was 11.3 percent as measured by the Urban CPI. This completely nullifies the sales growth, of course. In fact, sales declined in real terms. Measured in 1978 dollars, sales slipped from \$7,489.1 million to \$7,404.9 million.

Cost of sales is measured in accordance with LIFO. The cost of replacing inventory is, therefore, only slightly higher in percentage terms. In absolute terms, current cost of sales is \$112.2 million higher which implies sustainable income of only \$34 million, a considerable reduction from the reported \$146.2 million.

Depreciation, on the other hand, was based on assets which had been purchased some years previously. Current cost depreciation was \$373.3 million, as opposed to historical costs of \$227.4 million. The increase in depreciation expense of \$145.9 million reduces sustainable income to a net loss of \$111.9 million.

In the light of this loss, it is not surprising, perhaps, that the company was silent on the issue of dividends. On the one hand, dividends are no longer seen to be 64 percent of income but a repayment of capital effectively. Shareholders were not informed of this vital fact. On the other hand, while the dividend was maintained in nominal terms at \$93.1 million from 1978, in real terms it was only worth \$83.7 million. In other words, the company really paid out \$9.4 million less than in 1978.

What then of the companies' declared intent to reduce debt in an attempt to bolster its falling margins? Table 7 shows their monetary gain to be \$224.5 million, while their interest expense was \$204.0 million. Correctly interpreted, that means that, on the one hand, debts increased by the amount of the interest. On the other hand, what was owed decreased in real terms by the monetary gain. The net result is that Goodyear came out ahead by \$20.5 million.

Stated otherwise, Goodyear was a net debtor, paying rates of interest under 10% on old debt, while inflation was running at over 11%. The company was gaining in real terms. To repay the debt might improve the historical cost margins, which are irrelevant, but it would leave the company considerably worse off in real terms. What appears to be in line with

the genuine "clearly defined goals" of the company turns out to make no real sense at all.

By the same token, though, and in line with our earlier comments, if one wants to know how the company really did, one needs to take its constant dollar (or bread) income and add to it the monetary gain. As a result, Goodyear's net worth is seen to have risen in real terms by \$144.4 million. This is not very far from its reported net income. Its breakdown into sustainable income and monetary gain gives a quite different picture, though, than the one given by the directors.

It is also possible to reconstruct the realized and unrealized cost savings of the company. This is done on Table 8, where it is shown that realized cost savings were \$258.1 million. This is a substantial figure which completely eliminates the \$111.9 million loss. Realized income is \$146.2 and equal to historical net income. It is now seen to be entirely due to cost savings.

Realizable income is \$600.4. This is a huge number and considerably larger than any reported net income number. It reflects the \$258.1 million of realized cost savings and a further \$454.2 million that awaits realization in coming years. Seen in this light, the dividend no longer seems unreasonable.

On the other hand, Goodyear shows that the assets rose \$676.3 million in terms of the general price level. Subtracting this from the nominal price rise of \$712.3 million leaves a real increase of \$36.0. In other words, the cost savings were almost all paper gains. The real part should be added to the real income of \$144.4 million, of course. The end result is an increase in net worth in real terms of \$180.4 million.

To summarize then, the net worth of Goodyear increased by \$180.4 million. This reflects a better picture than the quoted net income of \$146.2 million. On the other hand, \$260.5 million of this increase is due to monetary gains

and cost savings. The sustainable income was a negative \$80.1 million in constant dollars. This suggests a long-run problem for Goodyear. This long-run problem would become immediate, if Goodyear eliminated its debt.

CONCLUSION

To conclude, it is apparent that this is a very different picture of the company to the one reported in the generally accepted income statement and balance sheet. It is also a story that contradicts the chairman's report in a number of important aspects. Finally, it suggests some very different financial strategies to management to those they have apparently espoused.

Goodyear is not an exception. This is not an isolated case drawn to illustrate a pathology. On the contrary, one can pick almost any company and discover the same qualitative results. My hope is that this article will serve to dispel some of the illusions that still seem to surround net income and to open up new avenues of interpretation of the effects of inflation.

Table 1: Comparative Balance Sheets (Current dollars)

	19X0 (unadjusted)	19X1 (unadjusted)	19X1 (adjusted)
Cash	\$105	\$180	\$180
Wagons	100	50	60
Equity	\$205	\$230	\$240

Table 2: Comparative Income Statements (Current dollars)

	19X1 (unadjusted)	19X1 (adjusted)	19X2 (unadjusted)	19X2 (adjusted)
Revenue	\$75	\$75	\$75	\$75
Cost of goods sold	50	<u>60</u>	50	<u>60</u>
Sustainable income		15		15
Realized cost savings		<u>10</u>		<u>-</u>
Realized income	<u>\$25</u>	25	<u>\$25</u>	15
Unrealized cost savings		<u>10</u>		<u>-</u>
Realizable income		<u>\$35</u>		<u>\$15</u>

Total income = \$25 + 25 (unadjusted)
 = 35 + 15 (adjusted)
 = \$50

Table 3: Comparative Balance Sheets (Constant dollars)

	19X0		19X1	
	Current dollars	Loaves of bread	Current dollars	Loaves of bread
Cash	105	105	180	150
Wagons	100	100	60	50
Equity	205	205	240	200

Change in equity = Increase of 35 dollars
 = Decrease of 5 loaves

Table 4: Income Statement (Constant dollars)

		19X1
	Current dollars	Loaves of bread
Revenue	75	62.50
Cost of goods sold	60	50
Sustainable income	15	12.50
Realized cost saving	10	-
Unrealized cost saving	10	-
Purchasing power loss of cash	-	(17.50)
Change in wealth	<u>\$35</u>	<u>(5.00)</u> loaves

Purchasing power loss = 105 loaves - 87.50 loaves
 = 17.50 loaves
 (87.50 = 105 ÷ 1.20)

Table 5: Depreciation and Amortization

	Initially	One year later	Two years later
Cost of new asset	\$20	\$24	\$30
Cost of second-hand asset		\$15	\$20

Table 6: Current Cost Income Statements

	19X1	19X2
Revenue	\$75	\$75
Cost of goods sold	60	60
Depreciation expense	<u>9</u>	<u>20</u>
Sustainable income	6	(5)
Realized cost savings		
- on inventory	10	-
- on furniture	<u>2</u>	<u>5</u>
Realized income	18	0
Unrealized cost savings		
- on inventory	10	-
- on furniture	<u>2</u>	<u>-</u>
Realizable income	<u>30</u>	<u>0</u>

Table 7: Statement of Income Adjusted for Changing Prices

	For The Year Ended December 31, 1979		
	As Reported In The Primary Statements	Adjusted For General Inflation (Constant Dollars)	Adjusted For Changes In Specific Prices (Current Cost)
<i>(Dollars in millions, except per share)</i>			
Net Sales	\$8,238.7	\$8,238.7	\$8,238.7
Other Income	92.4	92.4	92.4
	8,331.1	8,331.1	8,331.1
Cost and Expenses:			
Cost of goods sold (excluding depreciation) . . .	6,376.2	6,479.2	6,488.4
Depreciation.	227.4	350.7	373.3
Selling, administrative and general expense (excluding depreciation).	1,159.4	1,159.4	1,159.4
Interest expense.	204.0	204.0	204.0
Plant closures and sale of facilities.	60.6	60.6	60.6
Foreign currency translation loss.	40.1	40.1	40.1
Minority interest in net income of foreign subsidiaries.	6.5	6.5	6.5
	8,074.2	8,300.5	8,332.3
Income (loss) before income taxes	256.9	30.6	(1.2)
United States and foreign taxes on income	110.7	110.7	110.7
Net Income (Loss) for the Year	<u>\$ 146.2</u>	<u>\$ (80.1)</u>	<u>\$ (111.9)</u>
Net Income (Loss) per Share.	<u>\$ 2.02</u>	<u>\$ (1.11)</u>	<u>\$ (1.54)</u>
Unrealized gain from decline in purchasing power of net amounts owed not included above.		<u>\$ 224.5</u>	<u>\$ 224.5</u>
Increase in specific prices (current cost) of inventories and properties and plants held during the year			\$ 712.3
Effect of increase in general price level.			676.3
Excess of increase in specific prices over increase in general price level.			<u>\$ 36.0</u>



Date Due

FEB 28 '84
 JAN 13 '85
 JAN 31
 SEP 1 1986
 JUL 20 1986
 DEC 19 1986
 FEB 17 1987
 MAY 15 '87
 OCT 14 '87
 APR 17 '88
 MAY 07 1989
 OCT 16 '89
 JAN 02 1990
 MAY 16 1990
 JUN 20 1990
 JUN 16 1992
 JUN 02 1990
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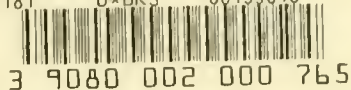
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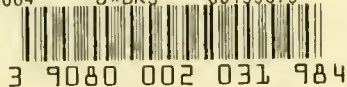
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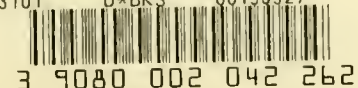
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